Name_____

# Bubble Gum Mini-Lab

Objective: To determine the percent of sugar in an ordinary piece of bubble gum.

Materials: Bubble gum in wrapper, centigram balance

Procedure:
1. Unwrap gum and tare paper on the balance.
2. Put gum on paper and determine mass. Record below.
3. Chew gum during class.
4. During the last 10-15 minutes of class, tare paper again and mass chewed gum. Record below.
5. Using data, determine the percent sugar in gum.

Data:

Mass of unchewed gum _____g

Mass of chewed gum _____g

Mass of sugar in gum _____g

Calculations:

1. What is the % sugar in your gum? Show calculations below.

_____ % sugar

2. How many moles of sugar, $C_{12}H_{22}O_{11}$, did you chew? Show calculations below.

_____ mol sugar

3. How many molecules of sugar were in your gum? Show calculations below.

_____ molecules sugar

# Percentage Composition

## *Practice Problems (Level 2)*

Find the percentage composition of each compound listed below. In the first eight problems, the correct formula or name is given. In the next six problems, laboratory data for the compound are presented.

1. $KNO_2$
2. $NH_4Cl$
3. $SrCl_2$
4. $KMnO_4$
5. sulfuric acid
6. potassium phosphate
7. ammonium bromide
8. barium hydroxide
9. Analysis of a compound shows that it consists of 43.40 g of copper and 10.95 g of sulfur. What is the percentage composition of this compound?
10. A sample of benzene is analyzed and found to consist of 13.74 g of carbon and 1.15 g of hydrogen. What is the percentage composition of benzene?
11. Analysis of an unknown compound shows that it consists of 21.8 g of oxygen, 4.09 g of aluminum, and 6.36 g of nitrogen. What is the percentage composition of this compound?
12. A compound consisting of carbon, hydrogen, and oxygen weighs 40.85 g. Analysis shows that the compound contains 10.90 g of carbon and 0.90 g of hydrogen. What is the percentage composition of the compound?
13. An organic compound consisting of carbon, hydrogen, and oxygen only weighs 13.669 g. Analysis shows that the compound contains 0.547 g and 8.707 g of the last two of these elements, respectively. What is the percentage composition of this compound?
14. Analysis of an ore of calcium shows it to contain 13.61 g of calcium and 21.77 g of oxygen in a sample weighing 46.28 g. What is the percentage composition of this compound?